

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action, however, tentatively rejected all claims 1-18. For at least the reasons set forth herein, Applicants respectfully request reconsideration and withdrawal of the rejections.

Claims 15-18 are amended to correct a noted informality, with reference to the independent claim 14. The amended claims contain no new matter nor raise any new issues. After entry of the foregoing amendments, claims 1-18 remain pending in this application.

Rejection of claims under 35 U.S.C. §102(b)(e)

The Office Action has rejected claims 1-2, 4-9, 11-15, and 17-18 as allegedly anticipated by Ofek (US 2004/0196834). Applicant respectfully requests reconsideration of these rejections for at least the following reasons.

Of the rejected claims, only claims 1, 7, and 14 are independent claims and the discussion below will focus on these claims.

It is well settled that "a rejection for anticipation under section 102 requires that ***each and every limitation*** of the claimed invention be disclosed in a single prior art reference." *In re Paulsen*, 31 USPQ 2d 1671 (Fed. Cir. 1994).

As explicitly recited in claims 1, 7 and 14, the claimed embodiments define a plurality of directional antennas (array antennas) respectively installed on a plurality of WLAN transceiver modules in an one-to-one correspondence (*i.e.*, one directional antenna (antenna array) is exactly coupled to one WLAN transceiver module in a WLAN device (smart antenna system), and therefore, by

increasing one set of directional antenna (antenna array) and WLAN transceiver module, the number of users can be increased accordingly (also see page 5 line 24 to page 6 line 8 of the specification).

Specifically, independent claims 1, 7, and 14 recite:

1. A WLAN (Wireless Local Area Network) device having a smart antenna system, comprising:
a plurality of WLAN transceiver modules; and
a plurality of directional antennas, respectively installed on said WLAN transceiver modules in an one-to-one correspondence, wherein said directional antennas are equally spaced apart in an annular array, and each of said directional antennas is responsible for the communication of a plurality of users in a cell.

7. A WLAN device having a smart antenna system, comprising:
a plurality of WLAN transceiver modules; and
a plurality of array antennas, respectively installed on said WLAN transceiver modules in an one-to-one correspondence, wherein each of said array antennas is composed of a plurality of omni-directional antennas, and the radiation patterns of said array antennas are controlled to be directional radiation patterns, and each of said array antennas is responsible for the communication of a plurality of users in two opposite cells.

14. A smart antenna system, comprising:
a plurality of directional antennas, respectively installed on a plurality of WLAN transceiver modules in an one-to-one correspondence, wherein said directional antennas are equally spaced apart in an annular array, and each of said directional antennas is responsible for the communication of a plurality of users in a cell.

(*Emphasis added.*) Claims 1, 7, and 14 patently define over the cited art for at least the reason that the cited art fails to disclose at least the features emphasized above.

In contrast, such as shown in FIG. 4, FIG. 5 and FIG. 9 and the related description, Ofek teaches N antenna sectors 450-1 to 450-N (960-1 to 960-N) coupled to R receivers 431 (931) via a N-to-R switch 433; and N antenna sectors 450-1 to 450-N (960-1 to 960-N) coupled to T transmitters 441 (941) via a N-to-R switch 433, wherein an antenna control unit 420 is used for selecting an antenna (also see Fig. 12 and the related description). Apparently, the N antenna sectors 450-1 to 450-N (960-1 to 960-N) are not installed in a one-to-one manner on the R receivers 431 and the T transmitters 441 (941).

Further, such as shown in FIG. 7 and the related description, Ofek teaches a Moveable Antenna System (AS) 750-1 which is coupled to a receiver 731-1 but not to a transmitter; and a Moveable Antenna System (AS) 750-2 which is coupled to a receiver 731-2 and a transmitter 741. Apparently, the Moveable Antenna System (AS) 750-1 is not coupled to a transceiver module (receiver + transmitter). Thus, Ofek fails to teach one directional antenna (antenna array) exactly coupled to one WLAN transceiver module in a WLAN device (smart antenna system) as explicitly recited in claims 1, 7, and 14 of the claimed invention.

For at least these reasons, independent claims 1, 7, and 14 are *prima facie* patentably distinguishable over Ofek and the rejections should be withdrawn. As claims 2-6, 8-13, and 15-18 depend from claims 1, 7, and 14, respectively, the rejections of these claims should be withdrawn for at least the same reasons.

Accordingly, Applicants respectfully request that the section 102(b) rejections be withdrawn.

Claim Rejections under 35 U.S.C. §103(a)

The Office Action rejected certain claimed embodiments under 35 U.S.C. §103(a). Specifically, the Office Action rejected claims 3, 10, and 16 as allegedly unpatentable over Ofek in view of Corbett et al. (US 7,130,586). Applicants respectfully traverse these rejections.

MPEP §2142 states that:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

Just as described above, Ofek fails to teach one directional antenna (antenna array) exactly coupled to one WLAN transceiver module in a WLAN device (smart antenna system), as explicitly recited in claims 1, 7, and 14 of the claimed embodiments. It is therefore respectfully submitted that that Ofek in view of Corbett cannot establish a *prima facie* case of obviousness under §103(a) with respect to claims 3, 10, and 16 (which depend from the independent claims 1, 7 and 14).

Accordingly, Applicants respectfully request that the section 103(a) rejections be withdrawn.

CONCLUSION

In light of the above remarks, all objections and rejections having been addressed, it is therefore respectfully requested that claims 1-18 be allowed so that the entire case may be passed to early issuance. If there are any remaining issues to be resolved, the applicant requests that the Examiner contact the undersigned.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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